CLAIMS:

1. A method of processing seismic data representative of the acceleration wavefield thereby to obtain information about the earth's subsurface direct from the seismic data representative of the acceleration wavefield.

2. A method as claimed in claim 1 and comprising the step of attenuating noise in a high frequency range in the seismic data.

3. A method as claimed in claim 2 wherein the step of attenuating noise in the high frequency range in the seismic data comprises a point source-point receiver noise attenuation step.

4. A method as claimed in claim 2 or 3 and comprising attenuating noise at frequencies over 100Hz in the seismic data.

5. A method of seismic surveying comprising: actuating a seismic source to emit seismic energy; acquiring seismic data representative of the acceleration wavefield using a seismic receiver spaced from the seismic source; and processing the seismic data according to a method defined in any of claims 1 to 4.

6. A method as claimed in claim 5 wherein the seismic source and the receiver are each disposed at or on the earth's surface.

7. A method as claimed in claim 5 wherein the seismic source is disposed at or on the earth's surface and the receiver is disposed within a borehole.

8. A method as claimed in claim 5 wherein the seismic source is disposed in a water column and the receiver is located at the base of the water column.

9. A method as claimed in claim 5 wherein the seismic source is disposed in a water column and the receiver is disposed within a borehole.

10. An apparatus for processing seismic data representative of the acceleration wavefield thereby to obtain information about the earth's subsurface direct from the seismic data representative of the acceleration wavefield.

11. An apparatus as claimed in claim 10 and comprising a programmable data processor.

12. A seismic surveying arrangement comprising a seismic source for emitting seismic energy; a seismic receiver for acquiring seismic data representative of the acceleration wavefield, the seismic receiver being spaced from the seismic source; and an apparatus as claimed in claim 10 or 11 for processing seismic data acquired by the receiver.

13. A seismic surveying arrangement as claimed in claim 12 wherein the seismic source and the receiver are each disposed at or on the earth's surface.

14. A seismic surveying arrangement as claimed in claim 12 wherein the seismic source is disposed at or on the earth's surface and the receiver is disposed within a borehole.

15. A seismic surveying arrangement as claimed in claim 12 wherein the seismic source is disposed in a water column and the receiver is located at the base of the water column.

16. A seismic surveying arrangement as claimed in claim 12 wherein the seismic source is disposed in a water column and the receiver is disposed within a borehole.

17. A storage medium containing a program for the data processor of an apparatus as defined in claim 11.

18. A storage medium containing a program for controlling a programmable data processor to carry out a method as defined in any of claims 1 to 4.

19. A program for controlling a computer to carry out a method as defined in any of claims 1 to 4.